

## REMARKS

Claims 1-43 are pending in the application. Claims 1, 7, 9, 13, 16, 25 and 34 are independent. By the foregoing Amendment, Applicant has added new claim 43, support for which may be found in Applicant's Specification at page 2, line 5. These changes are believed to introduce no new matter and their entry is respectfully requested.

### Rejection of Claims 1-42 Under 35 U.S.C. §103(a)

In the Office Action, the Examiner rejected claims 1-6 and 16-42 under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,411,257 to Sorelius *et al.* (hereinafter "*Sorelius*") in view of U.S. Patent No. 6,285,891 to Hoshino (hereinafter "*Hoshino*"). Applicant respectfully traverses the rejection.

To establish a *prima facie* case of obviousness, an Examiner must show that there is some suggestion or motivation to modify a reference to arrive at the claimed invention, that there is some expectation of success, and that the cited reference teaches each and every element of the claimed invention. (MPEP §2143.) *citing In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)). The initial burden is on the examiner to provide some suggestion of the desirability of doing what the inventor has done. "To support the conclusion that the claimed invention is directed to obvious subject matter, either the references must expressly or impliedly suggest the claimed invention or the examiner must present a convincing line of reasoning as to why the artisan would have found the claimed invention to have been obvious in light of the teachings of the references." *Ex parte Clapp*, 227 USPQ 972, 973 (Bd. Pat. App. & Inter. 1985). There are three possible sources for a motivation to combine references: (1) the nature of the problem to be solved, (2) the teachings of the prior art, and (3) the knowledge of persons of ordinary skill in the art. (MPEP §2143.01 *citing In re Rouffet*, 149 F.3d 1350, 1357, 47 USPQ.2d 1453, 1457-58 (Fed. Cir. 1998).) Applicant points out that the mere fact that references can be combined does not necessarily mean that the combination can be used to render the claimed obvious unless the prior art also suggests the desirability of the combination. (MPEP §2143.01 *citing In re Mills*, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990).)

Representative claim 1 recites in pertinent part “receiving uplink signals from a plurality of antenna array elements; estimating uplink spatial signatures from the received uplink signals; and characterizing the environment *based on* the estimated uplink *spatial signatures as* one of a plurality of predetermined *environments*” (emphasis added). In the Office Action, the Examiner states that *Sorelius* discloses essentially the claimed invention as set forth in the application as well as antenna angle of arrival estimation using uplink weight, characterizing an environment comprising receiving uplink signals, estimating uplink spatial signatures, and characterizing the environment based on uplink signatures. The Examiner concedes that *Sorelius* fails to disclose a plurality of predetermined environments, but cites *Hoshino* for that teaching that concept and concludes that it would have been obvious to modify *Sorelius* with the plurality of predetermined environments as taught in *Hoshino* for the purpose of extending the range of coverage. Applicant respectfully disagrees.

Applicant respectfully submits that contrary to the Examiner’s assertion, *Sorelius* does not teach or fairly suggest characterizing an environment based on uplink signatures as recited in representative claim 1. Applicant respectfully submits that *Sorelius* is not concerned with determining the specific character of the operating environment. *Sorelius* appears to be concerned with merely estimating the angle of arrival of one of the paths in the multipath signal. Thus, not only does *Sorelius* not teach this element, but Applicant respectfully submits that *Sorelius* is not properly applied to the claimed invention.

Applicant respectfully submits that *Hoshino* fails to make for this deficiency. Although *Hoshino* appears to disclose a “plurality of environments” these environments relate to user environments, such as a library or meeting room where the status of the user’s telephone may need to change. For example, the user may want to put the cell phone on vibrate to prevent its ringing from disturbing others in the particular “environment.” *Hoshino* is not concerned with the environment between uplinks and downlinks in which buildings or multiple users may cause interference or clutter on the signals. Consequently, *Hoshino* is not properly combined with *Sorelius* in this instance. There is no motivation to combine the “environments” discussed in *Hoshino* with the estimation of angle of arrival of *Sorelius* as the Examiner asserts. There is no indication that either *Hoshino* or *Sorelius* is concerned with extending the range of coverage.

(The mere fact that references can be combined does not necessarily mean that the combination can be used to render the claimed obvious unless the prior art also suggests the desirability of the combination. (MPEP §2143.01 citing *In re Mills*, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990).)

In any event, even if *Hoshino* could be combined with *Sorelius*, the combination fails to teach or fairly suggest each and every element of the claimed invention. For example, the combination of *Sorelius* in view of *Hoshino* fails to teach “characterizing the environment **based on** the estimated uplink **spatial signatures as** one of a plurality of predetermined **environments**” as recited in representative claim 1. There is no indication in either *Sorelius* or *Hoshino* either alone or in combination that the environments are characterized based on the estimated spatial signatures. In *Hoshino*, the user determines the environment and adjusts the phone accordingly.

Because *Sorelius* in view of *Hoshino* are not properly applied to and/or fails to teach each and every element of the claimed invention, Applicant respectfully submits that claims 1-6 and 16-42 are patentable over *Sorelius* in view of *Hoshino*. Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 1-6 and 16-42.

#### Rejection of Claims 7-12 Under 35 U.S.C. §103(a)

In the Office Action, the Examiner rejected claims 7-12 under 35 U.S.C. §103(a) as being unpatentable over as being unpatentable over *Sorelius* in view of U.S. Patent No. 6,185,440 B1 to Barratt *et al.* (hereinafter “*Barratt*”) and claims 13-15 under 35 U.S.C. §103(a) as being unpatentable over *Sorelius* in view of *Barratt* in further view of U.S. Patent No. 6,167,039 to Karlsson *et al.* (hereinafter “*Karlsson*”). Applicant respectfully traverses the rejection.

MPEP §706.02(a) provides that an examiner should determine whether a rejection is to be made under 35 U.S.C. §§102(a), (b), or (e) using a printed publication or patent that the Examiner believes discloses the claimed invention. MPEP §706.02(a)II.A. provides that if the publication or issue date of the cited reference is more than one year prior to the effective filing date of the application being examined, the cited reference can qualify as prior art under 35 U.S.C. §102(b).

MPEP §706.02(a)II.B. provides that if the publication or issue date of the cited reference is too recent for 35 U.S.C. §102(b) to apply, then the examiner should consider 35 U.S.C. §102(e). That is, the publication or issue date of the cited reference is less than one year prior to the effective filing date of the application being examined, then the cited reference cannot qualify as prior art under 35 U.S.C. §102(b), but can qualify as prior art under 35 U.S.C. §102(e).

MPEP §706.02(a)II.C. provides that if the cited reference has a publication date earlier than the effective filing date of the application being examined and the cited reference is not the applicant's own work then the cited reference cannot qualify as prior art under 35 U.S.C. §102(a). MPEP §706.02(a)II.C. further provides that a cited reference that is only prior art under 35 U.S.C. §102(e), (f), or (g) and applied in a rejection under 35 U.S.C. §103(a) can be disqualified under 35 U.S.C. §103(c) if the cited reference and the application being examined were commonly owned, or subject to an obligation of common assignment, at the time the invention was made.

Applicant respectfully submits that *Barratt* cannot qualify as prior art under 35 U.S.C. §103(a) because it is disqualified under 35 U.S.C. §103(c). The issue date of *Barratt* is February 6, 2001, which is not more than one year prior to the effective filing date, September 22, 2000, of the present application. Thus, *Barratt* cannot qualify as prior art under 35 U.S.C. §102(b). The issue date of *Barratt* is February 6, 2001, which is not earlier than the effective filing date, September 22, 2000, of the present application. Thus, *Barratt* cannot qualify as prior art under 35 U.S.C. §102(a). The issue date of *Barratt* is February 6, 2001, which is less than one year prior to the effective filing date, September 22, 2000, of the present application. Thus, *Barratt* can only qualify as prior art under 35 U.S.C. §102(e).

Applicant respectfully submits that *Barratt* and the claimed invention were at the time the invention was made owned by the ArrayCom, Inc., or subject to an obligation of assignment to ArrayCom, Inc. Applicant respectfully submits further that in light of common ownership and because *Barratt* can only qualify as prior art under 35 U.S.C. §102(e) *Barratt* is disqualified as

prior art under 35 U.S.C. §103(c). Accordingly, Applicant respectfully requests that the Examiner reconsider and remove the rejection to claims 7-12 and 13-15.

### CONCLUSION

Applicant submits that all grounds for rejection have been properly traversed, accommodated, or rendered moot and that the application is now in condition for allowance. The Examiner is invited to telephone the undersigned representative if the Examiner believes that an interview might be useful for any reason.

Respectfully submitted,

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